CLASS – XI CHEMISTRY ASSIGNMENT NO. 5

PERIODIC CLASSIFICATION OF ELEMENTS

Q1. Who gave Law of Trade?

Q2. Name the scientists who first arranged then known elements in order of increasing atomic weights.

Q3. Name the scientist who got Davy medal in 1887 by the Royal Society London and why?

Q4. Explain Leather Mayer's contribution in classification of elements.

Q5. What do you understand by periodicity for the elements?

Q6. Why it is not possible to measure the absolute value of the atomic radius of an element?

Q7. Based upon the nature of Bonding, what are the different forms of atomic radii?

Q8 Define each of one of atomic radii with example and compare them?

Q9. Explain variation of Atomic radii a long a period and down the group.

Q10. Out of Li^{+}, Be^{+2} and B^{+3}, which has the smallest ionic radius & why?

Q11. Which of the following are iso-electronic in nature?

(i) O^{2-} (ii) Na (iii) F (iv) S^{2-} (v) Mg^{2+} (vi) Al + 3

Q12. Select the species with smallest size in the following:- (a) I, I^{+}, I^{-} (b) N, O, P (c) F, Cl, Br

Q13. Among the elements with At No. 9, 12, 36 identify the element which is (a) highly electronegative (b) an inert gas in nature (c) highly electropositive in nature.

Q14. Arrange the following in increasing order of the property indicate:-

(i) F, Cl, Br and I (negative electron gain enthalpy) (ii) Mg^{+2}, O^{2-}, Na^{+}, F^{-}, and N^{3-} (ionic size).

(iii) Mg, Al, Si and Na (Ionization Enthalpy) (iv) Br^{+}, Br and Br^{-} (size) (v)GN, O and F (Ionization Enthalpy)

Q15. Would you expect the Ionization Enthalpies of 2 isotopes of same element to be same or different? Justify your answer?

Q16. Write the general e-configuration of S, P, d and f-block elements?

Q17. Argon (Atomic mass = 39.94) has been placed before Potassium (At mass 39.10) in the Periodic table. Why?

Q18. Explain (a) why do Ionization enthalpies decrease down a gp.

(b) Why do Ionization Enthalpies increase as we move along the period?

Q19. From each set, choose the element with largest Ionization enthalpy and explain your answer:-

(a) F, O, N (b) Mg, P, Ar (c) B, Al, Ba

Q20. Predict the position of the element in the periodic table satisfying the configuration (n-1) $d^{1}ns^{2}$ for n=4.